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NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

ANWAH, OLISA

ART UNIT PAPER NUMBER

2645

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/933,133

Applicant(s)

HOGAN ET AL.

Examiner

Olisa Anwah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 5, 11, 25 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 12-24, 26-28 and 30-49 is/are rejected.
- 7) ☒ Claim(s) 9 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 9 is objected to because it is not clear as to whether the claimed list refers to the forbidden list in claim 8 or the list claimed in claim 1. Appropriate correction is required.

2. Claim 24 is objected to because claim 23 limits the scope of claim 24 to update reject messages.

Claim Rejections - 35 USC § 102(b)

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 10, 12, 40 and 41 are rejected under 35 U.S.C. § 102(b) as being anticipated by Leih et al, WIPO International Publication No. WO 95/07010 (hereinafter Leih).

Regarding claim 10, Leih discloses a method implemented in a cellular communications system including a radio access

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network for serving plural geographic coverage areas (see Figure 1), comprising:

receiving a message from a mobile radio terminal (see t3 from Figure 2), and

sending to the mobile radio terminal (1 of Figure 1) information (see preference list from line 10 of page 4) indicating a list of the geographic coverage areas (A, B, C from Figure 1) from which the mobile radio terminal (1 of Figure 1) may or may not request service (see lines 15-20 of page 5),

wherein the mobile terminal uses the information to reduce signaling between the mobile terminal and the radio access network by not performing a geographic coverage area update procedure for a geographic coverage area (see D1 and D2 from Figure 2) included in the list.

Regarding claim 12, see t3 from Figure 2.

Regarding claim 40, Leih discloses radio access network apparatus for use in a cellular communications system including a radio access network serving plural geographic coverage areas (see A, B and C from Figure 1), comprising:

radio transceiving circuitry configured to receive a message from a mobile radio terminal (see t3 from Figure 2), and

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data processing circuitry configured to provide information indicating a list (see preference list from line 10 of page 4) of geographic coverage areas (see A, B and C from Figure 1) from which the mobile radio terminal (see 1 from Figure 1) may or may not request service (see lines 15-20 of page 5),

wherein the mobile radio terminal (see 1 from Figure 1) uses the information to reduce signaling between the mobile terminal (see 1 from Figure 1) and the radio access network by not performing a geographic coverage area update procedure for a geographic coverage area (see D1 and D2 from Figure 2) included in the list.

Regarding claim 41, see t3 from Figure 2.

Claim Rejections - 35 USC § 102(e)

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

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(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claims 23, 24 and 26 are rejected under 35 U.S.C. § 102(e) as being anticipated by Salmela et al, U.S. Patent No. 6,516,193 (hereinafter Salmela).

Regarding claim 23, Salmela discloses a location updating message (see line 2 from column 10) transmitted from a radio access network over a radio interface to a mobile radio terminal (MS), comprising:

a location updating message type field (see 59 from Figure 5);

a location area identification field (see LAI from line 64 of column 1);

a mobile terminal identification field (see IMSI from line 23 of column 6); and

a location area field (see list 10 from line 1 of column 10) indicating location areas (see LSA1, LSA2 and LSA3 from Figure 1) that the mobile terminal may or may not select;

wherein the message is a location updating reject message (see 59 from Figure 5).

On the issue of claim 24, see column 10, line 53.

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With respect to claim 26, see column 10, lines 35-45.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-4, 6-9, 13-22, 27, 28, 30-39 and 42-49 are rejected under 35 U.S.C. § 103(a) as being anticipated by Leih in view of Salmela.

Regarding claim 1, Leih discloses a method implemented in a mobile radio terminal (see 1 from Figure 1) for reducing signaling associated with the mobile radio terminal selecting a new geographic coverage area (see A, B and C from Figure 1), comprising:

receiving information indicating a list (see preference list from line 10 of page 4) of one or more geographic coverage areas (see A, B and C from Figure 1) from which the mobile radio terminal (see 1 from Figure 1) may or may not obtain service;

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storing the list of one or more geographic coverage areas
(line 12 of page 9);

checking the received information when considering whether
to request service from a new geographic coverage area including
checking the stored list prior to performing a subsequent
geographic coverage area update (see t1 and t2 from Figure 2);
and

determining whether to select a geographic coverage area
depending on the received information including determining
whether to perform a location area update procedure based on the
checked list (see t3 from Figure 2).

With further respect to claim 1, Leih does not disclose the
information is received from a radio access network.
Nevertheless, Salmela discloses this feature (observe column 10,
lines 1 to 2). Consequently, it would have been obvious to one
of ordinary skill in the art at the time the invention was made
to modify Leih with the receiving feature of Salmela. This
modification would have improved portability by allowing the
list to be stored at the network as suggested by Leih (see
Figure 3).

On the issue of claim 4, see t2 from Figure 2 of Leih.

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Regarding claim 27, Leih discloses a method for use in a cellular radio communications system including a core network coupled to a radio access network communicating information with mobile radio terminals over a radio interface, comprising:

storing (see lines 15-20 of page 5) a list (see preference list from line 10 of page 4) of location areas for a mobile terminal (see 1 from Figure 1);

receiving a communication (see t3 from Figure 2) from the mobile terminal (see 1 from Figure 1);

sending (see lines 15-20 of page 5) the list (see preference list from line 10 of page 4) of location areas (see A, B and C from Figure 1) to the mobile terminal (see 1 from Figure 1);

the mobile terminal (see 1 from Figure 1) receiving and storing (line 12 of page 9) the list of location areas (see A, B and C from Figure 1); and

the mobile terminal (see 1 from Figure 1) checking the list (see preference list from line 10 of page 4) of location areas (see A, B and C from Figure 1) and not performing a location area update operation for a location area (see D1 and D2 from Figure 2) that is on the list of areas in order to reduce signaling between the mobile terminal and the radio access network (see t3 from Figure 2).

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Leih does not disclose the mobile terminal is one from a group of mobile terminals. However Salmela discloses this limitation (see column 11, lines 20-30). And so, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the group disclosed by Salmela. This modification would have improved the flexibility of Leih by subdividing the preference list into categories and/or groups as suggested by Leih (see the last line of page 11).

With further respect to claim 27, Leih does not disclose the list is a list of forbidden areas. However Salmela discloses this limitation (see column 11, lines 5-20). And so, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the method of restricting disclosed by Salmela. This modification would have improved the flexibility of Leih by subdividing the preference list into categories and/or groups as suggested by Leih (see the last line of page 11).

As per claim 28, Leih does not disclose the one mobile terminal does not select a cell in a location area that is on the list of forbidden location areas. However Salmela discloses

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this limitation (see column 11, lines 5-20). And so, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the method of restricting disclosed by Salmela. This modification would have improved the convenience of Leih by providing tailored special services to which other mobile stations are not entitled for individual mobile stations as suggested by Salmela (see lines 4 through 6 from column 3).

Regarding claim 32, Leih discloses an apparatus for use in a mobile radio terminal (1 from Figure 1), comprising:

radio transceiving circuitry configured to receive information indicating a list (see preference list from line 10 of page 4) of one or more geographic coverage areas (see A, B and C from Figure 1) from which the mobile radio terminal (1 from Figure 1) may or may not obtain service (see lines 15-20 of page 5), and

electronic circuitry configured to perform the following tasks:

check the stored list prior to determining whether to perform a geographic coverage area update (see t1 and t2 from Figure 2), and

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determine not to perform a geographic coverage area update based on the checked list in order to reduce signaling between the mobile radio terminal and the radio access network (see t3 from Figure 2).

With further respect to claim 32, Leih does not disclose the information is received from a radio access network. Nevertheless, Salmela discloses this feature (observe column 10, lines 1 to 2). Consequently, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the receiving feature of Salmela. This modification would have improved portability by allowing the list to be stored at the network as suggested by Leih (see Figure 3).

On the subject of claim 33, Leih discloses the geographic coverage area is a location area (see A, B and C from Figure 1). Leih does not disclose the information is received in a location area update accept message in response to a first location area update request message sent by the mobile terminal to the radio access network. Nonetheless, Salmela teaches this feature (see column 10, lines 1 through 3). Consequently, it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to modify Leih with the message on location updating of Salmela. This modification would have improved portability by allowing the list to be stored at the network as suggested by Leih (see Figure 3).

On the subject of claim 34, Leih discloses the geographic coverage area is a location area (see A, B and C from Figure 1). Leih does not disclose the information is received in a location area update reject message in response to a first location area update request message sent by the mobile terminal to the radio access network. Nonetheless, Salmela teaches this feature (see column 10, lines 1 through 3). Consequently, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the message on location updating of Salmela. This modification would have improved portability by allowing the list to be stored at the network as suggested by Leih (see Figure 3).

As per claim 35, see t3 from Figure 2 of Leih.

On the issue of claim 36, Leih discloses the radio access network is shared by first and second operators (see A, B and C from Figure 1). Leih fails to show the information indicates one

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or more geographic coverage areas belonging to one of the operators that does not provide service to the mobile radio terminal, and wherein the electronic circuitry is further configured to select a geographic area belonging to the other of the operators. However Salmela discloses this feature (see column 11, lines 5-30). And so, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the method of restricting disclosed by Salmela. This modification would have improved the convenience of Leih by providing tailored special services to which other mobile stations are not entitled for individual mobile stations as suggested by Salmela (see lines 4 through 6 from column 3).

As per claim 37, Leih discloses the geographic coverage is a location area (see A, B and C from Figure 1). Leih does not teach the information includes a list of forbidden location areas for the mobile terminal. However Salmela discloses this feature (see column 11, lines 5-30). And so, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the method of restricting disclosed by Salmela. This modification would have improved the convenience of Leih by providing tailored special services to which other mobile stations are not entitled for individual

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mobile stations as suggested by Salmela (see lines 4 through 6 from column 3).

As per claim 38, Leih does not teach the electronic circuitry is further configured to not select a cell in a location area that is on the list of forbidden location areas. However Salmela discloses this feature (see column 11, lines 5-30). And so, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the method of restricting disclosed by Salmela. This modification would have improved the convenience of Leih by providing tailored special services to which other mobile stations are not entitled for individual mobile stations as suggested by Salmela (see lines 4 through 6 from column 3).

As per claim 39, Leih does not teach the electronic circuitry is further configured to not perform a location area update for a location area that is on the list of forbidden location areas. However Salmela discloses this feature (see column 11, lines 5-30). And so, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the method of restricting disclosed by Salmela. This modification would have improved the convenience

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of Leih by providing tailored special services to which other mobile stations are not entitled for individual mobile stations as suggested by Salmela (see lines 4 through 6 from column 3).

Claim 42 is rejected for the same reasons as claim 33.

Claim 43 is rejected for the same reasons as claim 34.

Claim 44 is rejected for the same reasons as claim 36.

Claim 30 is rejected for the same reasons as claim 36.

Claim 31 is rejected for the same reasons as claim 33.

Claim 2 is rejected for the same reasons as claim 33.

Claim 3 is rejected for the same reasons as claim 34.

Claim 6 is rejected for the same reasons as claim 44.

As per claim 7, see t3 from Figure 2 of Leih.

Claim 8 is rejected for the same reasons as claim 39.

On the issue of claim 9, see t3 from Figure 2 of Leih.

Claim 13 is rejected for the same reasons as claim 33.

Regarding claim 14, Leih fails to disclose updating the information in a subsequent geographic coverage area update message sent to the mobile terminal. Nonetheless, Salmela

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discloses this feature (see column 10, lines 1 and 2).

Consequently, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the message on location updating of Salmela. This modification would have improved portability by allowing the list to be stored at the network as suggested by Leih (see Figure 3).

Claim 15 is rejected for the same reasons as claim 34.

Claim 16 is rejected for the same reasons as claim 36.

As per claim 17, Although Leih discloses the geographic coverage area is a location area (see A, B and C from Figure 1). Leih falls short of explaining the method further comprises:

determining one or more groups identifying certain mobile terminals;

formulating a list of location areas corresponding to each of the groups; and

in response to the message received from the mobile terminal, forwarding one of the lists of location areas to the mobile terminal depending upon the group to which the mobile terminal belongs.

Despite Leih's shortcomings, Salmela discloses:

determining one or more groups identifying certain mobile terminals (column 11, lines 20-25);

formulating a list of location areas corresponding to each of the groups (column 11, lines 25-30); and

in response to the message received from the mobile terminal, forwarding (see column 10, lines 1-10) one of the lists of location areas to the mobile terminal (see MS from line of column 10) depending upon the group to which the mobile terminal belongs.

And so, Examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the message on location updating as shown by Salmela. This modification would have improved portability by allowing the list to be stored at the network as suggested by Leih (see Figure 3).

Regarding claim 18, nowhere does Leih show the determining, formulating and forwarding are performed in a core network coupled to the radio access network. All the same, Salmela reveals this mystery (see Figure 1). Consequently, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the network of Salmela.

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This modification would have improved portability by allowing the list to be stored at the network as suggested by Leih (see Figure 3).

Regarding claim 19, Leih fails to show the claimed group. However Salmela discloses this limitation (see column 11, lines 20-30). And so, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the group disclosed by Salmela. This modification would have improved the flexibility of Leih by subdividing the preference list into categories and/or groups as suggested by Leih (see the last line of page 11).

Regarding claim 20, Leih fails to show the claimed group. However Salmela discloses this limitation (see column 11, lines 20-30). And so, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the group disclosed by Salmela. This modification would have improved the flexibility of Leih by subdividing the preference list into categories and/or groups as suggested by Leih (see the last line of page 11).

Claim 21 is rejected for the same reasons as claim 17.

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Regarding claim 22, nowhere does Leih teach the information is sent from a core network to the radio access network. All the same, Salmela reveals this mystery (see lines 1 and 2 of column 10). Consequently, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leih with the message on location updating of Salmela. This modification would have improved portability by allowing the list to be stored at the network as suggested by Leih (see Figure 3).

Claim 45 is rejected for the same reasons as claim 17.

Claim 46 is rejected for the same reasons as claim 18.

Claim 47 is rejected for the same reasons as claim 19.

Claim 48 is rejected for the same reasons as claim 20.

Claim 49 is rejected for the same reasons as claim 21.

Response to Arguments

9. Applicant's arguments have been considered but are deemed to be moot in view of the new grounds of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olisa

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Anwah whose telephone number is 571-272-7533. The examiner can normally be reached on Monday to Friday from 8.30 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 571-273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

OA

Olisa Anwah
Patent Examiner
November 9, 2005


FAN TSANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600